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ORIGINAL ARTICLE

Cost effectiveness of brace, physiotherapy, or both for treatment of tennis elbow

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Background: The annual incidence of tennis elbow in the general population is high (1–3%). Tennis elbow often leads to limitation of activities of daily living and work absenteeism. Physiotherapy and braces are the most common treatments.
Objectives: The hypothesis of the trial was that no difference exists in the cost effectiveness of physiotherapy, braces, and a combination of the two for treatment of tennis elbow.
Methods: The trial was designed as a randomised controlled trial with intention to treat analysis. A total of 180 patients with tennis elbow were randomised to brace only (n = 68), physiotherapy (n = 56), or a combination of the two (n = 56). Outcome measures were success rate, severity of complaints, pain, functional disability, and quality of life. Follow up was at six, 26, and 52 weeks. Direct healthcare and non-healthcare costs and indirect costs were measured. Mean cost differences over 12 months were evaluated by applying non-parametric bootstrap techniques.
Results: No clinically relevant or statistically significant differences were found between the groups. Success rate at 12 months was 89% in the physiotherapy group, 86% in the brace group, and 87% in the combination group. Mean total costs per patient were €2069 in the brace only group, €978 in the physiotherapy group, and €1256 in the combination group. The mean difference in total costs between the physiotherapy and brace group was substantial (€1005), although not significant. Cost effectiveness ratios and cost utility ratios showed physiotherapy to be the most cost effective, although this also was not statistically significant.
Conclusion: No clinically relevant or statistically significant differences in costs were identified between the three strategies.

Tennis elbow, or lateral epicondylitis, is characterised by pain on the lateral side of the elbow, which is aggravated by resisted dorsal flexion of the wrist.[1 2] It is a common complaint, with an estimated annual incidence in the general population of 1–3%.[3 4] The natural history of tennis elbow is relatively mild: untreated, the complaints are estimated to last between six months and two years, and few patients need an operation.[2 5 6]

The pain experienced results in absence from work in about 16% of patients in Dutch general practice, with a mean sick leave of 9.3 weeks.[7]

Several treatment options are available,[8 9] including a wait and see policy, corticosteroid injections, orthotic devices, surgery, and several physiotherapeutic modalities. In the Netherlands, 28% of patients with tennis elbow are referred to a physiotherapist, and in 21% of the patients a brace is prescribed.[8–10]

Recent systematic reviews on the effectiveness of physiotherapy,[11] corticosteroid injections,[12] and orthotic devices such as braces[13] all conclude that, currently, insufficient evidence is available, with most trials being small and of insufficiently methodological quality. In addition, almost none of the trials has included a cost effectiveness analysis that also included indirect costs such as sick leave.

Because of the lack of evidence and the mild natural course, a wait and see policy is advised.[1 14] It is uncertain, however, if application of a brace in this approach is cost effective. Very limited evidence is available that confirms the wait and see policy. As no treatment strategy has yet been shown to be superior, we conducted a trial comparing the effectiveness and cost of commonly used interventions for tennis elbow, to give direction to the search for the optimal treatment.

Cost effectiveness analyses are important in current medical practice, as cost is nowadays often a decisive factor in whether an intervention is to be implemented.

METHODS

Setting

The trial was performed in the Netherlands between January 1999 and May 2001. Patients were recruited for inclusion by general practitioners and physiotherapists and referred to a research outpatient clinic. The hospital's medical ethics committee approved the study.

Patients

Patients were included if they had elbow complaints for at least six weeks and clinically diagnosed lateral epicondylitis: pain on the lateral side of the elbow, which aggravated with both pressure on the lateral epicondyle of the humerus and resisted dorsiflexion of the wrist. Exclusion criteria were bilateral complaints, a clear decrease in pain in the preceding two weeks, any form of treatment for the lateral epicondylitis episode in the six months before inclusion, and inability to fill out questionnaires.

Study design

Baseline assessments were performed by a medical doctor (GMMJ Kerkhoffs) before randomisation. They included patient characteristics, comorbidity, and baseline values of the outcome measures.

After providing written informed consent, patients were included in the trial. Randomisation was performed by a blinded researcher (PS), using a computer program with a minimisation strategy for duration of complaints—that is, $\leqslant$3 months, 3–6 months, and $\geqslant$6 months.[15 16]

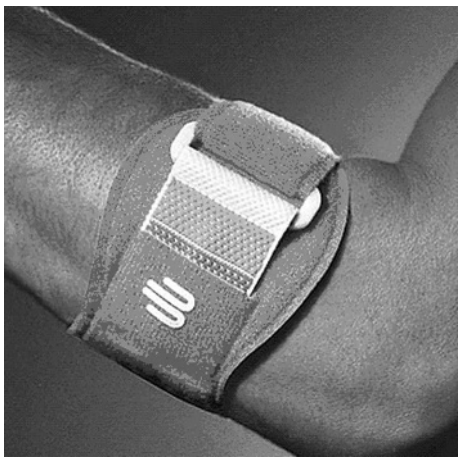

Figure 1 Brace used in treatment of tennis elbow.

Treatment strategies

Patients in the physiotherapy group were treated according to a standardised protocol (available on request from the first author). During the six week intervention period, patients received nine sessions, consisting of three, two, one, one, one, and one session(s) a week. Every session consisted of 7.5 minutes of pulsed ultrasound treatment according to the protocol of Binder *et al*.[17] In addition, patients were treated by friction massage for 5–10 minutes. When the pain subsided, patients were instructed in a strengthening and stretching protocol (available on request from the first author) to perform at home twice a day.[18] A standard treatment lasted 30 minutes.

Patients in the brace group were provided with the brace (Epipoint; Bauerfeind, Zeulenroda, Germany; fig 1) immediately after randomisation. They were instructed in its application and use by a researcher (PS) using a standardised protocol (available on request from the first author). They were asked to visit a participating physiotherapist once during the first week of the intervention period. The physiotherapist again instructed the patient according to the standardised protocol. Patients were advised to wear the brace continuously during the day throughout the intervention period. Activities that caused pain despite the use of the brace were discouraged.

Patients in the combination group received both the brace and physiotherapy.

Table 1 Costs used in the economic evaluation

	Cost (€)*
General practitioner (maximum session of 20 minutes)	16.59
Physiotherapist (maximum session of 30 minutes)	18.15
Outpatient care, medical specialist	40.84
Hospital stay per day	170.17†
Professional home care (per hour)	22.70‡
Acupuncture (first consultation)	93.35¶
Acupuncture (subsequent consultation)	46.70¶
Chiropractor (per session)	34.03¶
Help from partner/friends (per hour)	7.94
Absenteeism from paid labour (per hour)	Variable
Absenteeism from unpaid labour (per hour)	7.94

*€1 = US$1.26 (February 2004).
†Surgical treatment of tennis elbow as a procedure in day care.
‡Mean cost of professional home care in this study population.
¶Prices according to the Dutch Association for Acupuncture and Netherlands Chiropractic Association.

Outcome assessment

Outcomes were assessed by the blinded assessor (GMMJ Kerkhoffs) at six weeks and one year after randomisation. Main outcome measures were as follows.

- Global measure of improvement on a six point scale (1, completely recovered; 2, much improved; 3, little improved; 4, not changed; 5, a little worse; 6, much worse).[19 20] This measure was dichotomised: patients who reported being completely recovered or much improved were considered a success
- Severity of the patient's complaints (11 point scale: 0, no complaints; 10, serious complaints)
- Pain intensity of the patient's most serious complaint (11 point scale: 0, no pain; 10, severe pain)
- Quality of life, assessed using the EuroQol[21] and expressed as utility[22]

Economic evaluation

The main objective of the economic evaluation was to assess cost effectiveness and cost utility of brace only, physiotherapy, and the combination of brace and physiotherapy for patients with tennis elbow. It was performed from a societal perspective, so that direct healthcare, direct non-healthcare, and indirect costs were used as economic indicators (table 1). Firstly, relevant categories of resource utilisation were identified. Secondly, the volume of each category was measured and multiplied by the resource costs. Resource utilisation was collected using standard forms for physiotherapists and questionnaires filled out by patients at six, 26 and 52 weeks follow up.

The direct healthcare and non-healthcare costs were estimated according to the Dutch guidelines for cost analysis in healthcare research.[23] When these guidelines were not applicable, the tariffs of the Dutch Central Organisation for Health Care Charges were used to estimate the costs. Visits to other healthcare professionals—for example, acupuncturists—were estimated on the basis of prices recommended by their professional organisations. Drug costs were estimated using prices recommended by the Royal Dutch Society for Pharmacy.[24] The time a patient spent visiting a practitioner was also included in cost calculations, using a shadow price of €7.94 per hour.

Indirect costs of production losses were calculated for both paid and unpaid labour. For paid labour, these costs were calculated using the friction cost approach.[25 26] The basic concept of the friction cost approach is that the amount of production loss (and/or costs of maintaining production) because of sick leave depends on the time span needed to restore the initial level of production and costs. Sick employees can be replaced after a necessary period of adaptation, the friction period, which was estimated to be 122 days in the Netherlands.[23] For unpaid labour, the indirect costs were estimated using a shadow price of €7.94 per hour.

Statistical analysis

An intention to treat analysis was used in the economic evaluation. Fewer than 5% of the data were missing. Therefore missing costs were replaced by the mean of the measured costs based on previous data for the patient at issue.

To compare costs between groups, bootstrapping was used for pair-wise comparison of the mean differences in direct healthcare, direct non-healthcare, indirect, and total costs between the three interventions. Confidence intervals were obtained by bias corrected and accelerated bootstrapping, choosing 500 for the number of replications.[27]

The cost effectiveness and cost utility ratios were also calculated with bootstrapping (5000 replications) according to the bias corrected percentile method by using clinical

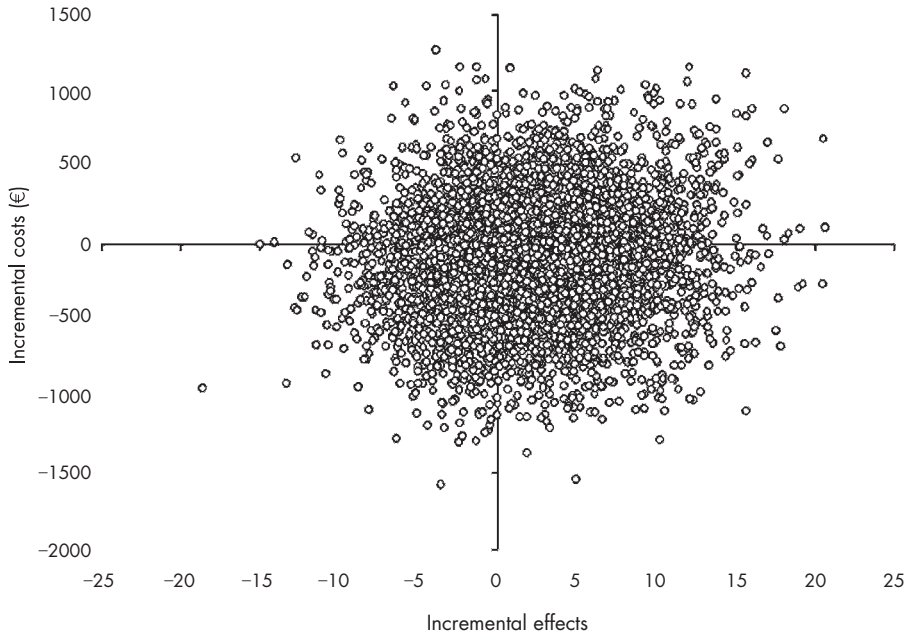

Figure 2 Example of a cost effectiveness plan comparing the effect of the combination treatment and physiotherapy for pain on the main complaint. No advantageous effects or costs for either treatment (equal distribution of cost-effect pairs in all quadrants) were shown.[20]

outcomes.[28] The bootstrapped cost-effect pairs were graphically represented on a cost effectiveness plane (fig 2). Acceptability curves were calculated, which show the probability that a treatment is cost effective at a specific ceiling ratio (fig 3).[29 30]

The differences in improvement between the groups with corresponding 95% confidence interval (95% CI) were computed and compared using one way analysis of variance. Logistic regression was used to analyse dichotomous outcomes.

Subgroup analyses were performed for:

(1) cost of sick leave based on a patient's true salary versus mean income of the Dutch population by age and sex;
(2) the influence of the intensity of labour (light/heavy) on work absenteeism.

Analysis 1 was performed to identify the influence of true income on the outcome of costs compared with the mean income of the Dutch population. A few patients with a high income can have an enormous influence on the cost of sick leave and thus on the cost effectiveness of a certain treatment. The second analysis was performed hypothesising that patients in jobs involving heavy labour are likely to be on sick leave for a longer period because performing such jobs with elbow pain is unlikely to be satisfactory for either the patient or the employer. The subdivision of light/heavy labour was made on the basis of whether lifting was a major part of the paid employment. This subdivision was made for each patient separately in a consensus group meeting with three authors. Statistical methods for the subgroup analyses were identical with those used for the whole group of patients.

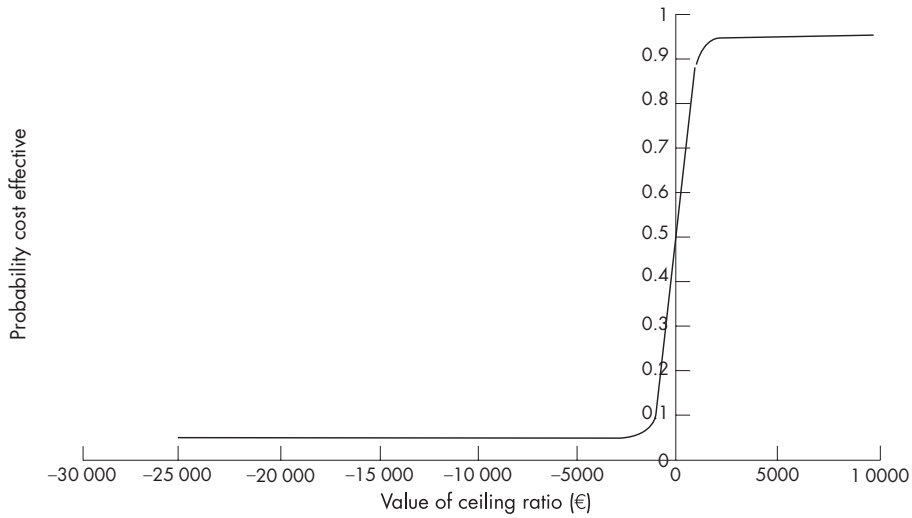

Figure 3 Acceptability curve for combination treatment and physiotherapy for pain on main complaint.

Table 2 Baseline characteristics

	Physiotherapy (n = 56)	Brace (n = 68)	Combination (n = 56)
Age (years)	43 (8)	46 (11)	47 (9)
Duration of complaints (weeks)	16 (16)	23 (30)	21 (37)
Male (%)	48	53	50
Dominant arm affected (%)	77	74	71
Neck/shoulder complaints (%)	18	25	18
Primary outcome measures			
Severity of complaints*	44 (18)	47 (19)	48 (17)
Pain most important complaint*	72 (20)	74 (18)	72 (15)
Pain-free function questionnaire†	48 (16)	51 (17)	52 (16)
Utility (EuroQol)‡	0.74 (0.19)	0.68 (0.25)	0.68 (0.28)

Unless otherwise indicated, values are mean (SD).
*Rated on numerical rating scales (0–10) and transformed into scores ranging from 0 to 100: 0, no complaints; 100, serious complaints.
†Questionnaire scores were 0–40; scores were transformed into scores of 0–100: 0, no complaints; 100, serious complaints.
‡ EuroQol score ranged from 0 to 1: 0, death; 1, perfect health.

RESULTS

In total, 180 patients were included in the trial and subsequently randomised to physiotherapy (n = 56), brace only treatment (n = 68), or the combination treatment (n = 56). At the one year follow up, complete cost data were available for 168 (93%) patients, 63 (93%) from the brace only group, 52 (93%) in the physiotherapy group, and 53 (95%) in the combination group. The baseline characteristics were well matched for all intervention groups (table 2). No significant differences in possible prognostic factors were identified.

Clinical effects

Table 3 gives the clinical effects. At the one year follow up, neither clinically relevant nor significant differences were identified (reported in more detail elsewhere[7]) on any of the primary outcome measures.

Utilisation of healthcare resources and work absenteeism

Table 4 presents information on utilisation of healthcare resources and work absenteeism. Visits to a general practitioner were minimal in all groups. As expected, the number of visits to a physiotherapist was highest in the physiotherapy and combination groups. The standardised programme consisted of nine sessions, but patients in both groups were additionally treated, adding up to a total mean number of treatment sessions of 11.8 and 13.6 sessions respectively. In the brace only group, the number of visits was substantial: after six weeks of brace only treatment, patients received additional physiotherapy treatment for a mean of 4.9 sessions. Patients in the brace only group received more professional home care as well as help from partner or friends compared with the physiotherapy and combination groups.

At the start of the trial, 42 (75%) patients in the physiotherapy group were employed, 55 (81%) patients in the brace only group, and 43 (77%) patients in the combination group. Sick leave was taken by four patients (4/42; 9%) in the physiotherapy group, 12 patients (12/55; 22%) in the brace only group, and seven patients (7/43; 16%) in the combination group. Over all groups, 16% of the patients reported taking sick leave for a mean period of 9.3 weeks.

Absenteeism from unpaid work was also higher in the brace only group: mean (SD) 42.6 (119.9) hours compared with 15.7 (41.8) hours in the physiotherapy, and 6.7 (17.0) hours in the combination group. This difference was, however, not significant.

One patient from the brace group had day-care surgical treatment in hospital. Medication was prescribed for two patients in the physiotherapy group and one in the combination group. An additional five patients bought drugs over the counter: two in the brace only group and three in the combination group.

Direct costs

Direct healthcare costs were significantly higher in the combination group than in the brace only and physiotherapy groups (table 5), mainly because of costs incurred during the intervention period.

Direct non-healthcare costs were significantly higher in the brace only group when compared with the physiotherapy group, but not compared with the combination group.

Mean (SD) total direct costs were €417 (386) in the physiotherapy group, €564 (1173) in the brace only group, and €518 (802) in the combination group. The difference is not significant.

Table 3 Results at one year follow up (mean improvement since baseline) for each intervention group in patients with tennis elbow with mean differences between groups

	Physiotherapy (A) (n = 56)	Brace (B) (n = 68)	Combination (C) (n = 56)	Mean differences in improvement (95% CI)		
				A–B	A–C	B–C
Success (%)	89 (47)	86 (54)	87 (47)	4 (−7 to 17)	3 (−8 to 16)	−1 (−14 to 12)
Severity of complaints†	28 (19)	31 (20)	32 (21)	−3 (−10 to 5)	−4 (−11 to 4)	−1 (−8 to 6)
Pain most important complaint†	60 (27)	60 (28)	58 (27)	0 (−10 to 11)	2 (−8 to 13)	2 (−8 to 12)
Pain Free Function Questionnaire‡	37 (16)	40 (18)	42 (20)	−3 (−9 to 3)	−5 (−12 to 1)	−2 (−9 to 5)
Utilities (EuroQol)¶	0.12 (0.16)	0.17 (0.29)	0.18 (0.30)	0.04 (−0.2 to 0.1)	0.05 (−0.2 to 0.1)	0.01 (−0.1 to 0.1)

Success was measured as the percentage of patients who recovered.
†Values are mean (SD). Rated on numerical rating scales (0–10) and transformed into scores ranging from 0 to 100: 0, no complaints; 100, serious complaints .
‡Values are mean (SD). Questionnaire scores are 0–40, and were transformed into scores of 0–100: 0, no complaints; 100, serious complaints.
¶Values are mean (SD). Score on EuroQol ranging from 0 (death) to 1 (perfect health).

Table 4 Type of utilisation of healthcare resources and work absenteeism per intervention group during 52 weeks

Healthcare resource (unit of measurement)	Physiotherapy (n = 56)	Brace (n = 68)	Combination (n = 56)
General practice (no of visits)	0.10 (0.4)	0.09 (0.4)	0.2 (0.6)
Physiotherapy (no of treatment sessions)	11.8 (7.4)	4.9 (11.0)	13.6 (8.8)
Medical specialist (no of treatment sessions)	0.04 (0.3)	0.06 (0.3)	0.02 (0.1)
Professional home care (no of hours)	1.4 (7.6)	7.0 (33.9)	0 (0)
Alternative health care (no of visits)	0.09 (0.7)	0.2 (1.3)	0.05 (0.4)
Help from partner/friends (no of hours)	1.4 (35.6)	30.3 (96.7)	5.9 (16.3)
Absenteeism from paid labour (no of days)	4.3 (19.6)	11.7 (32.4)	5.6 (19.3)
Absenteeism from unpaid labour (no of hours)	15.7 (41.8)	42.6 (119.9)	6.7 (17.0)

Values are mean (SD).

Indirect costs

Indirect costs were significantly higher in the brace only group than in the physiotherapy group (table 5). Costs in the brace only group were €1416 (2890) compared with €557 (1851) in the physiotherapy group (mean difference €859 (95% CI 174 to 1870)). No significant differences in indirect costs were present either between physiotherapy and combination treatment or between brace only and combination treatment.

Total costs

Total costs were €975 (1989) in the physiotherapy group, €1980 (3673) in the brace only group, and €1258 (2403) in the combination group (table 5). The difference in total costs between physiotherapy and brace only treatment was €1005 (95% CI −34 to 1964).

Cost effectiveness ratios and cost utility ratios

For brace only versus physiotherapy, the cost effectiveness ratios for outcome measures success rate, severity of complaint, and pain for the most serious complaint differed significantly, all favouring physiotherapy (table 6).

Comparing brace only and combination treatment, statistically significant ratios were found for success rate, pain for most important complaint, and score on EuroQol, all favouring combination treatment.

Comparing cost effectiveness ratios for physiotherapy and combination treatment, no significant differences were identified. On the cost effectiveness plane (fig 2), cost-effect pairs are equally distributed in all quadrants, suggesting that physiotherapy and the combination treatment do not differ in either cost or effect.

Sensitivity analyses

The mean true income in this trial was similar for the brace only (€159 net a week) group and the combination group (€158). In the physiotherapy group, it was somewhat higher: €208.

Using the Friction costs method, mean sick leave costs were €1081 for the brace only group, €436 for the physiotherapy group, and €621 for the combination group. Using the mean income for all patients, these sick leave costs were comparable: €921 for the brace only, €341 for the physiotherapy, and €439 for the combination group.

Using this true mean income, sick leave costs were €758 for the brace only group, €277 for the physiotherapy group, and €259 for the combination group. Thus, with the true income method, the combination treatment turns out to be the least costly intervention, whereas if the other two methods are used, the physiotherapy treatment is the least costly.

The results of this sensitivity analysis did not lead to different conclusions.

In the brace only group, 55 patients (81%) had jobs during the trial, of which 32 (58%) were light jobs and 23 (42%) were heavy labouring jobs. In the light labour group, five patients (16%) reported a mean of 64 days sick leave. In the heavy labour group, seven patients (30%) reported a mean of 68 days sick leave.

In the physiotherapy group, 42 patients (75%) had jobs during the trial, of which 28 were light jobs and 14 were heavy labouring. In the light labour group, one patient (4%) reported a mean sick leave of 125 days. In the heavy labour group, three patients (21%) reported a mean sick leave of 39 days.

In the combination group, 43 patients (77%) had jobs during the trial, of which 23 were light labour jobs and 20 were heavy labour jobs. In the light labour group, two patients (9%) reported a mean sick leave of 91 days. In the heavy labour group, five patients (25%) reported a mean sick leave of 26 days.

Neither of these two sensitivity analyses led to different conclusions from those resulting from the primary analysis.

DISCUSSION

At the one year follow up, no clinically relevant or statistically significant differences in effectiveness were found between the three intervention groups. Therefore cost may be a decisive factor in deciding which treatment is to be preferred for tennis elbow. Although the mean total costs in the physiotherapy group were €1005 lower than in the brace only

Table 5 Bootstrap of the mean (SD) difference in costs in euros over a one year period for patients with tennis elbow treated with physiotherapy, brace, or a combination of the two

	Physiotherapy (A) (n = 56)	Brace (B) (n = 68)	Combination (C) (n = 56)	Mean difference (95% confidence interval) A–B	B–C	A–C
Direct healthcare cost total	237 (149)	190 (342)	309 (225)	−47 (−116 to 70)	−119 (−214 to −18)	−72 (−153 to −17)
Direct non-healthcare cost total	179 (298)	374 (1042)	204 (613)	195 (8 to 574)	170 (−79 to 517)	−25 (−271:94)
Direct cost total	417 (386)	564 (1173)	518 (802)	−147 (−502 to 68)	46 (−316 to 392)	−101 (−504 to 46)
Indirect cost total	557 (1851)	1416 (2890)	739 (2072)	−859 (−1870 to −174)	677 (−234 to 1539)	−182 (−1035 to 463)
Total costs	975 (1989)	1980 (3673)	1258 (2403)	−1005 (−964 to 34)	722 (−474 to 1838)	−283 (−1378 to 407)

Table 6 Cost effectiveness and cost utility ratios

Outcome measure	Brace *v* physiotherapy	Brace *v* combination	Physiotherapy *v* combination
Success rate (%)*	33 641 (7363 to 2 263 232)	68 423 (31 827 to 989 896)	5625 (−6679 to 597 372)
Severity of complaint*	405 (37 to 101 453)	−835 (−53 181 to −229)	26 (−522 to 929)
Pain most serious complaint*	3142 (2765 to 537 918)	356 (64 to 47 910)	−42 (−9836 to 155)
Pain-free function questionnaire*	324 (−249 to 33 774)	−392 (−52 981 to 42)	17 (−374 to 510)
Score on EuroQol†	23 517 (−33 173 to 1 384 289)	−71 897 (−25 485 695 to −25 396)	1588 (−60 339 to 65 790)

Values are ratio (95% confidence interval).
*Cost effectiveness ratio.
†Cost utility ratio.

group, this difference was not significant. One could argue that our study lacked power to find a statistically significant relevant difference in costs. Indeed, the sample size calculation was based on identifying a relevant difference in clinical effects and not in costs. The sample size necessary to detect a difference of €1000 would have been 120 patients per group.[31]

Baseline characteristics were comparable for all intervention groups. Differences were not significant and are therefore unlikely to influence the overall treatment effect of the treatment strategies studied.

The direct healthcare costs in the physiotherapy and combination group were significantly higher than in the brace only group. This difference was mainly the result of the greater number of physiotherapy sessions in the intervention period. The indirect costs were highest in the brace group. This may suggest that the direct costs of physiotherapy may be worth while because the results imply that physiotherapy is associated with an earlier return to work and less absenteeism. This is, however, hypothetical and cannot be stated for certain based on the results of this trial.

The cost effectiveness ratios showed physiotherapy to be superior to the use of a brace on three out of four outcome measures. This suggests that physiotherapy should be the preferred treatment. However, the confidence intervals are so large that it should be questioned whether this conclusion can definitively be drawn. The same can be said for cost effectiveness ratios for comparison of brace and combination treatment.

A recent study evaluating physiotherapy, corticosteroid injections, and a wait and see policy for tennis elbow showed similar costs for the physiotherapy group.[32] In our trial, the total costs in this group were €975, and the costs in the trial described by Korthals-de Bos *et al*. were €921. On the basis of these two trials, a wait and see policy and physiotherapy seem to be the most efficient treatment options for tennis elbow.

To summarise, because in our trial none of the treatments were clinically superior at the long term follow up, the treatment that costs least should be the preferred initial treatment. Physiotherapy cost considerably less than the brace only treatment, although the difference was not significant. As no significant differences were identified in either effect or cost, we cannot suggest a preferred intervention from the results of this trial.

Some clinical questions were not addressed in our trial. Future research should focus on patients whose complaints have not resolved after a wait and see policy. Which treatment is best for these non-responders should further be studied. In addition, more studies should focus on the speed of recovery and identification of subgroups that may favour certain specific interventions (and the diagnostic tools to diagnose these).

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What is already known on this topic

- There are no previous studies on the cost of braces for tennis elbow
- One previous study compared the cost and effectiveness of physiotherapy, corticosteroid injections, and a wait and see policy

What this study adds

- This study completes the comparison of costs for the most often used conservative treatment strategies for tennis elbow

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COMMENTARY

More than 40 treatments for tennis elbow have been described in the literature, but it is the wait and see policy recommended by general practitioners in the Netherlands that is currently most often discussed. It has stirred up a lot of emotion in the sports medicine world all around the globe and will be the topic of discussion at the next tennis medical conference at Roland Garros, Paris, in June 2006. This study adds an interesting element to the discussion by not only calculating the direct healthcare costs, but also the indirect costs. Also, the authors draw attention to the fact that a solution needs to be found for patients who do not respond to the wait and see policy. With the recent positive publications on eccentric training for Achilles tendon and patellar tendon problems, I look forward to a trial comparing the effectiveness of eccentric training with a wait and see policy for tennis elbow. And I definitely look forward to the discussions at Roland Garros!

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